Google Rise Grant Proposal
Benton Elementary School
September 9, 2013

Grant Summary:

Funding from the Google RISE grant will allow Benton to continue to expand our STEM program by adding additional technology tools. The additional computers will give us a 1:2 ratio in grades 3-5 and additional iPads will allow grades K-2 to have five in each classroom. The other technology tools (robot cubes, 3D printer, microscopes, etc.) will help students explore science and engineering concepts at a deeper level. By giving our students access to technology tools, we can help teach them the important role technology plays in our society. We can also provide our low-income, minority students with the necessary background experiences with technology that will better prepare them to be successful in school and their future careers.

No matching funds are required.

Grant funds requested: $33,980

Google RISE Awards

These questions will help you provide the information we need to assess the suitability of your program for a RISE award. We recognize that not every program will exactly match all our goals and beliefs, so please provide what information you can and don't worry if not all of our questions match your program.

Organization Details

About the organization * Provide a brief description of the mission of the organization (max 100 words).

Benton STEM Elementary School serves students grades kindergarten through fifth and provides all the educational services we come to expect from an elementary school. Benton is a high-poverty, school-of-choice with a focus on science, technology, engineering and math (STEM). This STEM focus pushes students to think critically, solve complex problems, and drive advancements in science and technology. Our vision is learning through discovery, leading with character. We strive to set high expectations for academic achievement for staff and students, engage students in real-world learning experiences, empower students to take ownership in their learning, and develop collaborative partnerships with the community.

Organization Legal status (non-profit, social enterprise, …. other please state) *

School, non-profit

What are the top 3 strengths of your organization? *

Engagement of students, focus on STEM areas, motivated staff

Organization YouTube Channel (if applicable)

NA

Program details

If your organization runs multiple programs, please list details below only for the program you are applying for funding.

Program/Project name *

Edutainment: Technology for Exploration and Discovery

City and country location(s) of operation of the populations served through the program (Cities, Countries, Continents) *

Columbia, MO USA

Please provide a one-paragraph summary of your program (max 100 words).

Description of program to be funded *

Funding from this grant will be used to enhance the technology integration in science, engineering, and mathematics at Benton STEM Elementary. Requested materials help students see how technology is used to develop critical thinking skills and enhance their conceptual understanding of the content. By integrating more laptops, iPads, and other technology tools like telescopes, digital microscopes, and robot sensor cubes, students begin to see how technology helps people explore concepts at a deeper level. Funding will also incorporate many engineering technology tools for students to explore. Teachers will receive training on how to incorporate these technology tools into daily instruction.

Program goals * List up to 5 program goals for the coming year and how you plan to achieve them (maximum 100 words).

- 2:1 technology ratio in every classroom by purchasing enough iPads and laptops.
- Help teachers effectively integrate technology by providing technology professional development on various topics (Blogging/websites, Twitter, Blackboard, Lync, Video making/editing, Google Apps, Chrome, and YouTube editor).
- Incorporate more technology tools related to science instruction by purchasing science tools such as digital microscopes and telescopes.
- Decrease the amount of behavior referrals by increasing the amount of time students are engaged in learning with technology tools.
- Increase parent involvement by encouraging families to come to the school and see what their students are learning including projects created using technology.

Do you collaborate with any other organizations nationally or internationally with in regards to this program? If so, which?

We work collaboratively with our school district to support and maintain the current technology equipment in our building. The school district and technology department also provide our teachers with professional development focused on using technology to enhance learning and not just something to play with.

Program dates * Note the proposed dates of activities/key events in 2014.

2013 – 2014 School year – purchase technology and integrate into classroom, technology professional development program for teachers

2014 -2015 School year – continue professional development as needed

Program format * Workshop, club, course, community, etc.

Professional development sessions will be workshop format. The actual program will be incorporated into daily classroom instruction with students working independently and collaboratively at various times during the day.

Program Participants

Tick which demographics the program is aimed towards: *

X **Girls**

X **Boys**

X **Children in Lower Socioeconomic Areas**

X **Ethnic minorities**

Other...

Which geographical area does the program cover?

Local town (specify)

Columbia

Region (specify)

Midwest

Country (specify)

USA

International (specify)

NA

Number of students involved in the program in total to date: *

NA

Number of students involved in the program in 2013: *

Approximately 280

Proposed number of students to be involved in 2014: *

Approximately 280

If you could expand your efforts to reach 10 times more students, what would you need to make this happen? (Thinking beyond more funding and staffing) *

This would require a partnership with another school and close collaboration with our district technology department. Our teachers can only directly impact the students at our school. However, if our teachers could become confident enough to lead other professional development sessions for other teachers, they could share what they have learned with other teachers in the district. In turn, this will help other teachers incorporate more technology into their classrooms and instruction.

How will a RISE Award impact your program? *

The RISE Award will provide us with the necessary funding to expand our STEM program by incorporating more technology into the classrooms. The funding will help us expand our technology to include science tools students can use to help them understand the concepts they are learning. By giving our students the necessary tools, we can help teach them the important role technology plays in our society. We can also provide our low-income, minority students with the necessary background experiences with technology that will better prepare them to be successful in school and their future careers.

<u>Student Engagement</u>

Does your program have a pre- and post- engagement strategy to keep students connected and engaged with CS/STEM? If yes, please explain.

Our building has already begun integrating technology into our classroom instruction. Students are frequently exploring and learning with the iPads and laptops. The excitement level for our students is already high when teachers pull technology tools into classroom instruction. In terms of post-engagement, teachers and staff will continue to attend professional development focused on using technology as a tool to enhance student learning. This will ensure students are continuing to be exposed to various types of technology on a regular basis in their classroom.

How do you measure the success/impact/outcomes of your program and can you share an example of how you have improved your program as a result of such evaluation? *

Three specific measures can be used to judge the impact of our programs. One measure would be to collect data on the number of classrooms hosting classroom celebrations involving technology. A second measure would be collecting teacher lesson plans to analyze the frequency of technology and how it is used. The third measure would be to analyze the behavior referrals during technology integration times. This would allow the staff to see how engaged students were when technology was incorporated into instruction.

Data collected at Benton during the 2011-2012 school year after a philanthropic gift allowed the purchase of a class set of iPads point to the effectiveness of technology in helping to establish

and maintain a positive learning environment. Only 3% of last year's disciplinary referrals occurred when the iPads were in use. This is dramatic even considering that, if the iPads were in continuous use, only one class–8.3% of students–could use the iPads at any given time. Anecdotal teacher reports support the idea that students were more engaged in learning when iPads were in use.

Budget

Amount of funding requested: Please enter a number between $15,000 and $50,000 USD.

$34,000.00

What is the total budget required to run the program (annually)? *

Annual budget would include any maintained and upkeep but this is covered through the district.

Have you secured other sources of funding for the program in the past and/or for the coming year? If so, from whom?

We have received donations through the Anderson Foundation to purchase additional laptops for our classrooms.

Budget Breakdown How will funding from RISE be spent? (Please list)

- 4 Telescopes = $360
- 4 Hand Held Anemometers = $640
- 15 Handheld Digital Microscopes = $900
- 1 X-Box Connect w/ sport & dance = $400
- 2 Cubelets Robot Kit = $1,045
- 4 Makey Makey Circuit Tool = $200
- 1 3D Printer = $800
- 15 Digital Cameras = $1185
- 20 Microphones = $830
- 25 Laptops = $16,250
- 30 iPads = $11,370
- **Total** = $33,980

Name(s) of any Googler(s) currently belonging to or involved with your organization:

NA

Is this the first time Google has worked with your organization? If not, who was your primary contact at Google and which program were you involved in? *

YES

Other

Anything else you want to tell us to support your application? (Max 150 words)

Benton is a school of choice in Columbia, Missouri which means we receive the same funding as other public school s. However, our focus on STEM Education pushes us to provide additional experiences outside of a traditional public school such as in-depth exposure to science and math concepts, instruction in the area of engineering, and increased opportunities to explore and learn with various technology tools. For this reason, we rely heavily on funding through grants and outside donors to help us provide these additional opportunities to our students. We realize it takes the collaboration of educators, family, and the community to help our students succeed. With your help, we can continue to follow our vision of students learning through discovery and leading with character.